

# **New York State Energy Planning Board**

## **Renewable Energy Development**

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## **Renewable Energy Development**

- The Plan's Renewable Energy Assessment will consider various renewable technologies, including:
  - Hydropower
  - Solar technologies
  - Wind – Land / Off-shore
  - Biomass
  - Biofuels
  - Geothermal
- Assessment will provide foundation to consider future renewables policy in the Plan
- Presentation will focus on RPS, deployment challenges



## **Why Renewable Energy?**

- Indigenous resources reduce energy imports
- Keeps energy expenditures in-State
- Helps meet environmental and climate change goals, while meeting energy demand
- Creates economic development opportunity and job growth
- Long-term price stability (fuel is free)
- Improve grid reliability – Peak load/demand offset



## **Development Driven by Renewable Portfolio Standard**

- 25 percent electricity from renewable sources by 2013, approved by PSC in 2004
- NYSERDA administers funding collected by utilities and uses it to provide incentives to developers
- Contracted projects to date:
  - 1,340 MW of new renewable capacity by year-end 2009
  - 3.8 million MWh annually, enough to power 635,000 homes



## RPS Results to Date

- Environmental Benefits – Avoided Emissions (Equivalent)
  - Nitrogen Oxides (NO<sub>x</sub>) - 2,600 tons annually
  - Sulfur Oxides (SO<sub>x</sub>) - 5,200 tons annually
  - Carbon Dioxide (CO<sub>2</sub>) - 1.9 million tons annually
- \$742 million RPS funding to date projected to leverage \$2.1 billion in private investment and over \$4 billion in economic spin-off over next 20 years



## **Challenges to Deployment**

- Impacts on Consumer Energy Bills
  - near-term cost impact vs. need for technology and market development
- Next Generation Bio-energy
  - need for alternative high-value liquid fuels and sustainable crop and land use management
- Transmission and Delivery
  - moving upstate renewable energy supplies to high demand areas may require investment in transmission and or greater siting of resources closer to load
- Limitations
  - Intermittency of wind and solar, lack of storage capacity, siting



## **Conclusion**

- Renewable energy assessment well under-way
- Need to clearly define policy, economic, and environmental trade-offs
- Need to understand stakeholder concerns in order to responsibly develop and deploy renewable resources
- Need to identify renewable energy potential, bill impacts, and most efficient and effective means of meeting policy goals